

In the Claims

Claims 1-60 (canceled).

Claim 61 (currently amended): A semiconductor construction, comprising:

- a semiconductor substrate;
- an insulative material over the semiconductor substrate;
- trenches extending within the insulative material;
- a first conductive wiring layer within the trenches and partially filling the trenches, the first conductive wiring layer comprising n-type conductively-doped silicon;
- porous silicon over and directly against the n-type conductively-doped silicon of the first conductive wiring layer within the trenches, the porous silicon being p-type doped;
- an active molecular switchable memory material within pores of the p-type doped porous silicon, ~~the active molecular switchable memory material being selected from a group consisting of redox active catenane, redox active rotaxane, redox active pseudorotaxane, and mixtures thereof;~~ and
- a second conductive wiring layer over and directly against the p-type doped porous silicon and active molecular switchable memory material therein.

Claim 62 (original): The switchable circuit device of claim 61 wherein the active molecular switchable memory material comprises two stable states which are interchanged by oxidation and reduction of the material.

Claim 63 (previously presented): The semiconductor construction of claim 61 wherein the active molecular switchable memory material comprises redox-active catenane.

Claim 64 (previously presented): The semiconductor construction of claim 61 wherein the active molecular switchable memory material comprises redox-active rotaxane.

Claim 65 (previously presented): The semiconductor construction of claim 61 wherein the active molecular switchable memory material comprises redox-active pseudorotaxane.

Claims 66 and 67 (cancelled).

Claim 68 (currently amended): The semiconductor construction of claim 61 wherein the second conductive wiring layer comprises ~~conductively-doped~~ conductively-doped silicon.

Claim 69 (original): The semiconductor construction of claim 61 wherein the first conductive wiring layer defines lines extending primarily along a first direction; and wherein the second conductive wiring layer is formed in a shape of a line extending primarily along a second direction substantially perpendicular to the first direction.

Claim 70 (new): The semiconductor construction of claim 61 wherein the active molecular switchable memory material is selected from a group consisting of redox-active catenane, redox-active rotaxane, redox-active pseudorotaxane, and mixtures thereof.